

1 data values of the second device and the physical appearance of the image in the first device being the same as the physical appearance of the image in the second device.

4. (Twice Amended) The method of claim 1 wherein if the color data values in the gamut expanded sRGB color space lie outside a range of the RGB data values of the second device, further including clipping the color data values for the second device.

6. (Twice Amended) The method of claim 1 wherein the gamut expanded sRGB color space is linear in visual intensity.

7. (Twice Amended) The method of claim 1 wherein the gamut expanded sRGB color space an XsRGB color space that includes at least the visible range of color values, and where selected, one of the gamut expanded RGB color space and the gamut expanded RGBA color space includes an alpha channel for at least one of: transparency information and opaqueness information.

8. (Twice Amended) The method of claim 1 wherein the gamut expanded sRGB color space includes a color space defined by a gamut that extends into negative component values and beyond 1.0 when normalized to 1.0 in RGB.

9. (Twice Amended) The method of claim 1 wherein mapping the RGB color values to the gamut expanded sRGB color space includes utilizing multiplication of

D3 R_0 , G_0 , B_0 values by a predetermined matrix, where the R_0 , G_0 , and B_0 values denote normalized numerically linear red, green and blue components for a color value.

D4 SUB E15 11. (Amended) The method of claim 1 wherein each color data value of the source color space uses a signed 16 bit integer and 13 bits are used as a decimal portion.

D5 SUB E15 13. (Amended) The method of claim 4, wherein mapping includes, where color data values of the first device have been represented using signed 16 bit values and 13 bits of decimal precision, clipping the 16 bit values below 0 and above 8192 to convert the 16 bit values to 8 bit values.

14. (Amended) The method according to claim 1, wherein the color data values of the first device are one of non-premultiplied color data values; premultiplied color data values; and normalized numerically linear premultiplied color values.

D6 15. (Twice Amended) In a digitized image processing system in which an image digitizer outputs digital signals representing an image, a method for providing representation of color images from measured RGB color values in a color management system, comprising the steps of:

mapping the measured RGB color values to a gamut expanded sRGB color space, wherein the sRGB expanded color space includes color values beyond a reproduction range of a specific device and includes all colors in a humanly visible gamut; and

26 converting the gamut expanded sRGB color data values of the gamut expanded sRGB color space into RGB color data values representing an image in a destination device, the measured RGB color data values being different from the RGB color data values of the destination device and the physical appearance of the image output by the digitizer device being the same as the physical appearance of the image in the destination device.

16. (Twice Amended) The method of claim 15 wherein the gamut expanded sRGB color space includes an XsRGB color space defined by a gamut that extends into negative component values and beyond 1.0 when normalized to 1.0 in RGB, and where selected, wherein the expanded sRGB color space includes an alpha channel for at least one of: transparency information and opaqueness information.

17. (Amended) The method of claim 15, wherein said mapping the measured color values to an expanded sRGB color space includes utilizing multiplication of R_0 , G_0 , B_0 values by a predetermined matrix, where the R_0 , G_0 , B_0 values denote numerically linear red, green and blue components for a color value.

18. (Amended) The method of claim 17, wherein the R_0 , G_0 , B_0 values are obtained in accordance with the following:

$$\begin{bmatrix} R_0 \\ G_0 \\ B_0 \end{bmatrix} = \begin{bmatrix} 3.241 & -1.5374 & -0.4986 \\ -0.9692 & 1.8760 & 0.0416 \\ 0.0556 & -0.2040 & 1.0570 \end{bmatrix} \begin{bmatrix} X \\ Y \\ Z \end{bmatrix}$$

wherein X, Y, and Z denote 1931 Commission Internationale de l'Eclairage XYZ values wherein Y has been normalized to 1.

19. (Amended) The method of claim 15 wherein, wherein each measured color data value uses a 16 bit integer and 13 bits are used as a decimal portion.

20. (Amended) The method of claim 15, wherein 16 bit components R_{16} , G_{16} , and B_{16} of measured color data values are given by:

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$$\begin{bmatrix} R_{16} \\ G_{16} \\ B_{16} \end{bmatrix} = 8192 \times \begin{bmatrix} R_0 \\ G_0 \\ B_0 \end{bmatrix}$$

where the R_0 , G_0 , B_0 values denote normalized numerically linear red, green and blue components for a color value.

21. (Amended) The method of claim 15, wherein if measured color data values have been represented using signed 16 bit values with 13 bits of decimal precision, further including clipping the 16 bit values below 0 and above 8192 to convert the 16 bit values to 8 bit values.

22. (Amended) The method of claim 15, wherein the measured color data values are one of non-premultiplied color data values; premultiplied color data values; and normalized numerically linear premultiplied color data values.

5/15/07 23. (Twice Amended) A computer-readable medium having computer-executable instructions for performing the steps of:

mapping measured color values to a gamut expanded sRGB color space, wherein the gamut expanded sRGB color space includes color values beyond a reproduction range of a specific device and includes all colors in a humanly visible gamut; and

converting the gamut expanded sRGB color data values of the gamut expanded sRGB color space into RGB color data values representing an image in the destination device, the measured RGB color data values being different from the RGB color data values of the destination device and the physical appearance of the image output by the digitizer device being the same as the physical appearance of the image in the destination device.

5/15/07 57. (Amended) In a digitized image processing system in which an image digitizer utilizes color image information to output RGB digital color signals representing a color image to an apparatus that uses the digital color signals to provide representation of a color image in a color management system, the apparatus comprising:

an expanded sRGB color space mapper, for mapping the digital color data signals representing RGB color data values of the image digitizer to gamut expanded sRGB color space values; and

a processor for converting said gamut expanded sRGB color space values to RGB color space values representing an image in a destination peripheral device, the RGB color data values of the image digitizer being different from the RGB color data values of the destination peripheral device and the physical appearance of the image in the image

D₉ digitizer being the same as the physical appearance of the image in the destination peripheral device.

60. (Amended) A method for representing color images in a color management system in a gamut expanded sRGB color space and further representing at least one of super transparent and super opaque colors using an alpha channel, comprising the steps of:

representing RGB color data values of a source peripheral device as one of perceptually visible super transparent data values and perceptually visible super opaque data values in said gamut expanded sRGB color space; and

converting one of said perceptually visible super transparent data values and perceptually visible super opaque data values to RGB color data values of a destination peripheral device, the RGB color data values of the source peripheral device being different from the RGB color data values of the destination peripheral device and the physical appearance of an image represented by the RGB color data values in the source peripheral device being the same as the physical appearance of an image represented by the RGB color data values in the destination peripheral device.

REMARKS

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Claims 1, 4, 6-23, 57 and 60 remain pending. Claims 2, 3, 5, 24-56, 58 and 59 have been canceled without prejudice or disclaimer.